

Supporting information

Synthesis of a photocurable acrylated poly(ethylene glycol)-co-poly(xylitol sebacate) copolymers hydrogel for tissue engineering and 3D printing ink

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Table S1. Molar ratios of PEXS monomers.

Sample code	PEG ₆₀₀₀ (g)	SAA (g)	Xylitol (g)	Molar ratio (PEG:SAA:Xylitol)	PEG (wt%)
PEXS-70%	35	8.56	6.44	1.4:10:10	70%
PEXS-60%	30	11.41	8.59	0.9:10:10	60%
PEXS-50%	25	14.27	10.73	0.6:10:10	50%

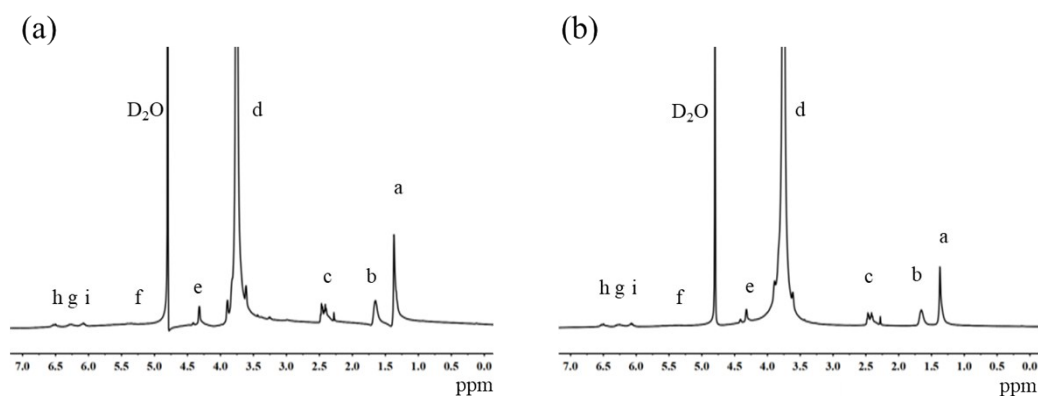


Fig. S1 ¹H-NMR spectra of PEXS-2A (a) and PEXS-4A (b) copolymers.

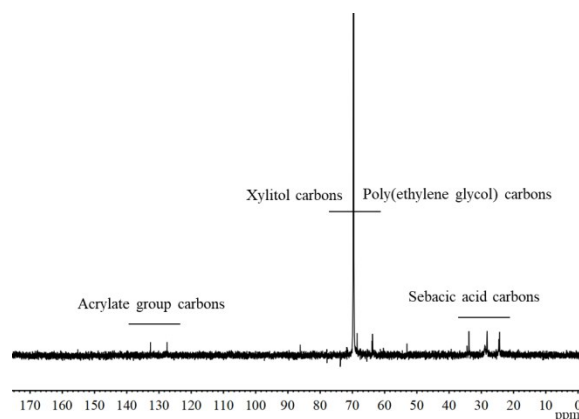


Fig. S2 ¹³C-NMR spectrum of PEXS-3A copolymer.

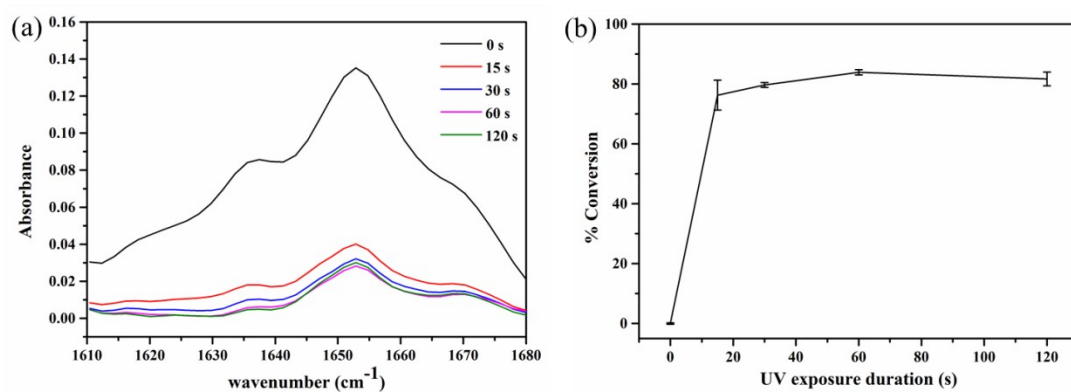


Fig. S3 Photopolymerization kinetic of PEXS-3A hydrogel. (a) Fourier-transform infrared spectra of PEXS-3A copolymer solution and freeze-dried PEXS-3A hydrogels after 15, 30, 60 and 120 seconds of UV exposure. (b) Percentage of conversion of vinyl bonds (C=C) (peak at 1650 cm^{-1}) calculated using freeze-dried hydrogels and normalized to the C=O stretching peak at 1733 cm^{-1} as an internal standard at different UV (365nm) exposure duration.

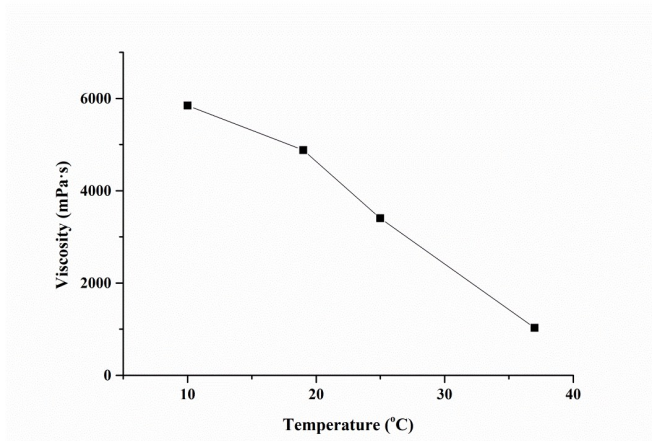


Fig. S4 Viscosity curve of PEXS-3A (25% w/v) copolymer in relation with temperature.

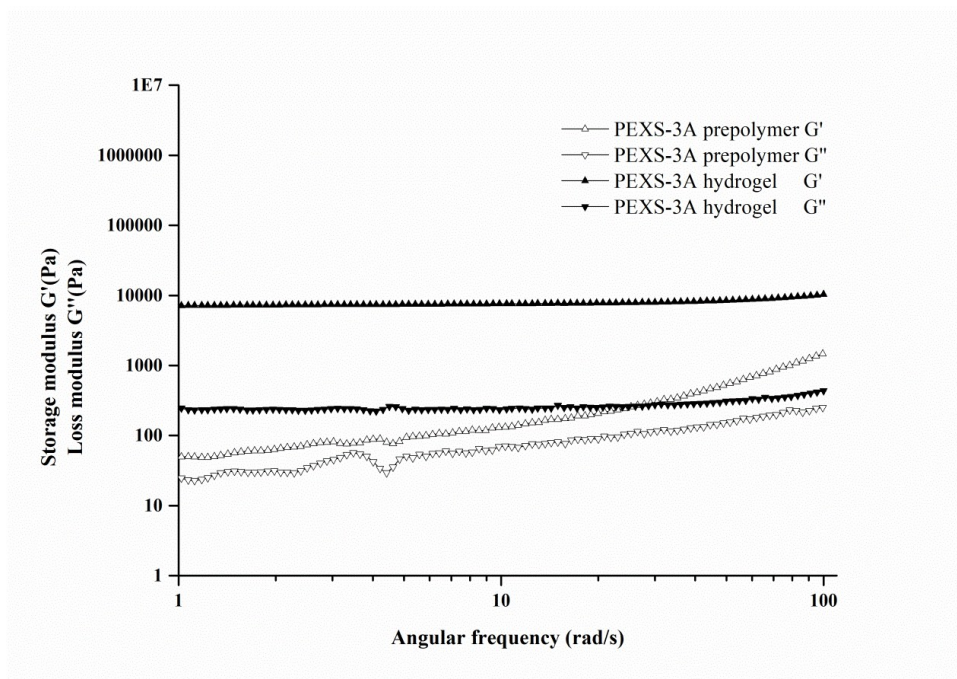


Fig. S5 Rheological characterization of PEXS-3A copolymer and hydrogel.

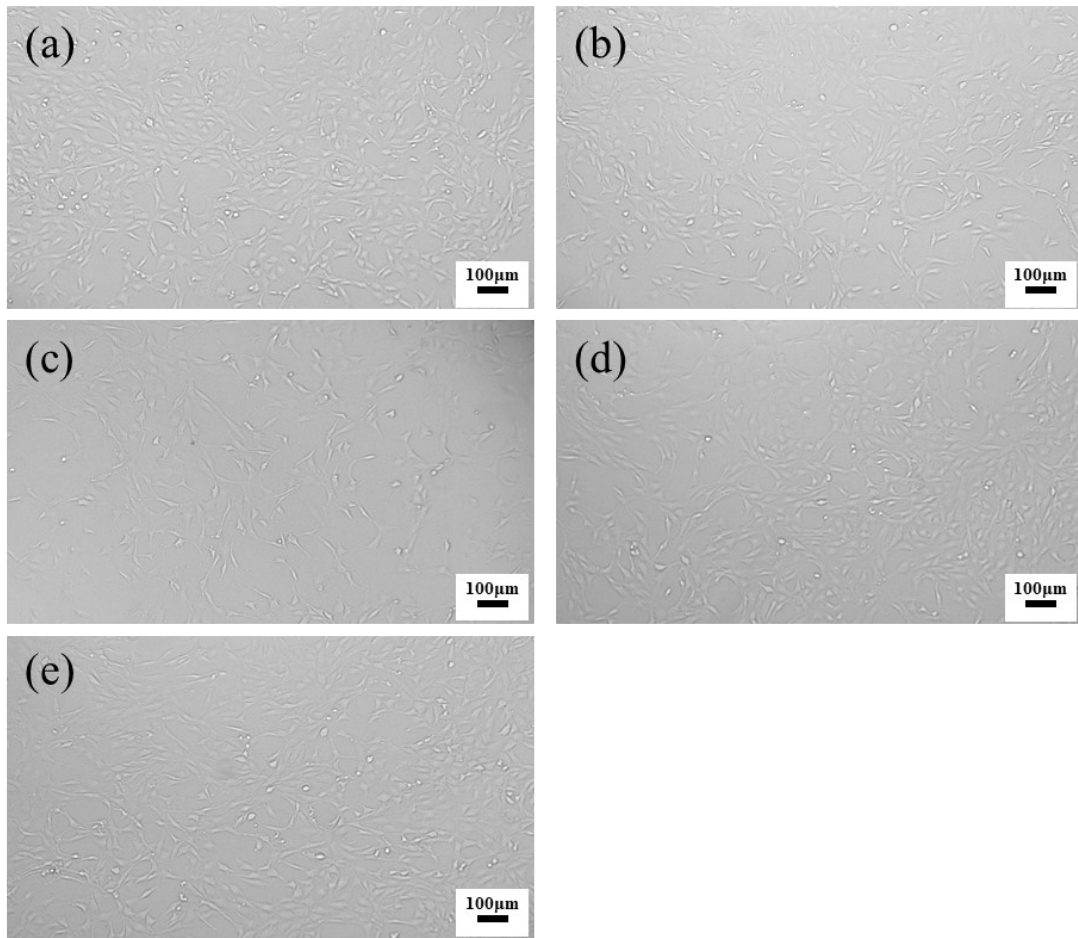


Fig. S6 3T3 fibroblast cells cultivated in (a) DMEM pristine medium, (b) PDLLA, (c) PEXS-2A, (d) PEXS-3A or (e) PEXS-4A hydrogel extractant.